

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

- 1.-17. (Canceled)
18. (Currently amended) A method for purifying actin comprising the steps of:
 - (a) preparing a solution of globular actin (G-actin); ~~G-actin~~; and
 - (b) contacting said solution with a magnesium salt, whereby G-actin polymerizes to form actin paracrystals; and
 - (c) recovering said actin paracrystals to obtain purified actin.
19. (Previously presented) The method of Claim 18, wherein said magnesium salt is magnesium chloride.
20. (Currently amended) The method of Claim 19, wherein said magnesium salt is present in said solution at a concentration of at least 10mM ~~is used~~.
21. (Currently amended) The method of Claim 20, wherein said magnesium salt is present in said solution at a concentration of from about 25 to about 100mM.
22. (Currently amended) The method of Claim 21, wherein said magnesium salt is present in said solution at a concentration of from about 40 to about 60mM.
23. (Currently amended) The method of Claim 22, wherein said magnesium salt is present in said solution at a concentration of about 50mM.
24. (Currently amended) The method of Claim 18, wherein said G-actin is from a mammalian source.
25. (Currently amended) The method of Claim 24, wherein said G-actin is human cardiac α -actin.

26. (Currently amended) The method of Claim 24, wherein said G-actin is human skeletal muscle actin.

27. (Currently amended) The method of Claim 24, wherein said G-actin is from chicken.

28. (New) The method of Claim 18, further comprising depolymerizing the recovered actin paracrystals to form purified G-actin.

29. (New) The method of Claim 28, further comprising polymerizing the purified G-actin to form purified F-actin.